Clean Version of Pending Claims Under Consideration

13. The method of claim 62 wherein the mismatch repair gene is *PMS2*.

14. The method of claim 62 wherein the mismatch repair gene is human *PMS2*.

18. The method of claim 14 wherein said mismatch repair gene comprises a truncation mutation.

19. The method of claim 14 wherein said mismatch repair gene comprises a truncation mutation at codon 134 as shown in SEQ ID NO:1.

20. The method of claim 19 wherein the truncation mutation is a thymidine at nucleotide 424 of wild-type *PMS2* as shown in SEQ ID NO:1.

29. The hypermutable, nonhuman, transgenic animal of claim 60 comprising a protein which consists of the first 133 amino acids of human PMS2.

52. The hypermutable, nonhuman, transgenic animal of claim 61 wherein the mismatch repair gene is *PMS2*.

53. The hypermutable, nonhuman, transgenic animal of claim 61 wherein the mismatch repair gene is human *PMS2*.

58. The hypermutable, nonhuman, transgenic animal of claim 61 wherein the dominant negative allele comprises a truncation mutation at codon 134 as shown in SEQ ID NO:1.

59. The hypermutable, nonhuman, transgenic animal of claim 58 wherein the truncation mutation is a thymidine at nucleotide 424 of wild-type *PMS2* as shown in SEQ ID NO:1.

60. A hypermutable, nonhuman, transgenic animal wherein at least 50% of the cells of said animal comprise a dominant negative allele of a mismatch repair gene.

61. A hypermutable, nonhuman, transgenic animal produced by a process comprising introducing a polynucleotide comprising a sequence encoding a dominant negative allele of a mismatch repair gene into said animal, whereby said animal becomes hypermutable.

62. A method of making a hypermutable, nonhuman, fertilized egg comprising introducing into said fertilized egg a polynucleotide comprising a sequence encoding a dominant negative allele of a mismatch repair gene, whereby said fertilized egg becomes hypermutable.